

# Study on Clinical Profile of Cases of Fistula-In-Ano Admitted at VIMS, Pawapuri.

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## ABSTRACT

**Background:** Fistula-in-ano is one of the common anorectal conditions. Knowledge of its pattern is helpful in proper management of cases. **Methods:** The present hospital based study was conducted upon 55 cases to assess the profile and surgical outcome. Background details of patients, the details of their illness, the treatment given and the details of post-operative period were recorded. **Results:** Most of the patients belonged to the age group of 31-40 years with male: female ratio of 3.59:1. All the patients suffered from discharge and had external opening. Most of the patients had low anal fistula (78.2%). External opening was located posteriorly in 72.7% patients. Mean healing time was  $3.7 \pm 1.1$  weeks. 14.5% patients had wound infection and 7.3% suffered from headache. **Conclusion:** Fistula-in-ano has male preponderance. Fistulectomy is the usual procedure and the post operative complications tend to be minimal.

**Keywords:** Fistula-In-Ano, Anorectal.

## INTRODUCTION

Fistula-in-ano is one of the common perianal conditions reporting to surgery and is a major cause of persistent discharge and discomfort.<sup>[1]</sup> Anal Fistula is caused by an abnormal communication between the anorectum and perianal skin.

The main strategy for surgical management of an anal fistula is to eradicate it without disturbing anal continence. To achieve this, three basic surgical techniques used are fistulotomy, use of a Seton, and endorectal advancement flaps.<sup>[2]</sup> The main principles of management are to close the internal opening, to drain the infective or necrotic tissue, and to eradicate the fistulous tract with preservation of sphincter function.<sup>[3]</sup>

Low fistulae are the commonest type of anal fistula. It is easily treatable by conventional laying-open technique. High fistula is difficult to treat as conventional laying-open method will result in incontinence.<sup>[4]</sup>

The prevalence and pattern of anal fistula is important for the surgeon to be familiar with the possible challenges and to plan for the remedies. Few studies have been done to assess this. Hence, the present study was proposed.

## Aims & objectives

The present study was conducted to find the aetiology, clinical features and outcome of the surgical management of fistula-in-ano among the cases admitted at the department of Surgery, VIMS, Pawapuri.

## MATERIALS AND METHODS

The present study was hospital based observational in nature conducted at the department of Surgery, VIMS, Pawapuri between May 2015 to February 2016. The patients reporting to the department and diagnosed to be suffering from fistula-in-ano who underwent surgery were included in the study. The cases in which fistula was due to injury, Crohn's disease or congenital in nature were excluded. A total of 55 patients reporting during the study period were included in the study.

Detailed clinical history and clinical examination of all the patients was done including per-rectal examination. Necessary laboratory investigations and radiological assessment were also done. Details of fistula included number of external openings and their location according to Goodsall's rule, number of internal openings and its relation to anorectal ring. The patients underwent fistula surgery according to their type of fistula and were kept under observation. They were regularly followed-up and the course of recovery and development of complications were noted.

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Pretested proforma was used for data collection. Details of background of patients, the details of their illness, the treatment given and the details of post-operative period were recorded. Data was entered into Microsoft Excel 2007 and was analyzed using SPSS v 16.0. Data was summarized as per its type. Qualitative variables were represented as frequency and percentage while quantitative variables were summarized as mean & SD. 95% CI was calculated. Appropriate statistical tests were done to calculate significance. p value of less than 0.05 was considered to be statistically significant. Informed consent was taken in all the cases and the records were kept confidentially.

## RESULTS

A total of 50 patients were included. [Table 1] shows the background profile of the patients. Most of the patients belonged to the age group of 31-40 years

(38.2%). Two patients (3.6%) were above 60 years of age. 78.2% patients were males and 21.8% were females resulting in male: female ratio of 3.59:1. All the patients suffered from discharge (100%). Pain was seen in 67.3% while swelling was complained of in 38.2% patients. External opening was seen in all the patients (100%).

[Table 2] shows the details of fistula. Most of the patients had low anal fistula (78.2%) followed by submucous one (10.2%). External opening was seen in all the patients and was located posteriorly in 72.7% patients. The aetiology could be ascertained in the dissected specimens and was found to be due to non-specific inflammation in 70.9% cases and tuberculosis in one patient (1.8%).

[Table 3] shows the type of surgery done. Fistulectomy was done in 72.7% cases while fistulotomy was performed in 27.3%.

**Table 1: Background profile of the patients**

Background profile	Values	Frequency (n=55)	%	95% CI
Age	Up to 20	1	1.8	-1.7-5.3 %
	21-30	9	16.4	6.6-27.1 %
	31-40	21	38.2	25.4-54.5 %
	41-50	13	23.6	12.4-36.4 %
	51-60	10	18.2	8-29.5 %
	Above 60	2	3.6	-1.3-8.6 %
Sex	Male	43	78.2	67.3-100 %
	Female	12	21.8	10.9-34.1 %
Presenting complaints	Discharge	55	100	-
	Pain	37	67.3	54.9-89 %
	Swelling	21	38.2	25.4-54.5 %

**Table 2: Details of the fistula**

Details of fistula	Values	Frequency (n=55)	%	95% CI
Type of fistula	Subcutaneous	5	9.1	1.5-17.1 %
	Low anal	43	78.2	67.3-101.6 %
	Submucous	6	10.9	2.7-19.6 %
	High anal	1	1.8	-1.7-5.3 %
Location of external opening	Anterior	10	18.2	8-29.5 %
	Posterior	40	72.7	60.9-95.2 %
	Lateral	4	7.3	0.4-14.4 %
Aetiology	Non specific inflammation	39	70.9	58.9-93.2 %
	Tuberculosis	1	1.8	-1.7-5.3 %

**Table 3: Surgery done for the treatment of fistula**

Surgery performed	Frequency (n=55)	%	95% CI
Fistulectomy	40	72.7	60.9-95.2 %
Fistulotomy	15	27.3	15.5-41.1 %

**Table 4: Post-operative complications**

Post-operative Complications	Frequency (n=55)	%	95% CI
Wound infection	8	14.5	5.2-24.6 %
Headache	4	7.3	0.4-14.4 %
Retention of urine	1	1.8	-1.7-5.3 %

Following the surgery, the patients were followed up for post-operative course and development of complications. Mean healing time was  $3.7 \pm 1.1$  weeks. 14.5% patients had wound infection, 7.3%

suffered from headache and retention of urine was seen in one case (1.8%).

## DISCUSSION

31-40 years (38.2%) was the most common age group in the present study. Vyas et al,<sup>[1]</sup> and Sharma et al,<sup>[5]</sup> also observed similar pattern in Madhya Pradesh while Agarwal et al,<sup>[6]</sup> found that most of the patients were in their fifth decade of life in Uttar Pradesh. Male: female ratio of 3.59:1 was observed in the present study. Vyas et al,<sup>[1]</sup> found high ratio of 11.8:1 and Kumar et al,<sup>[2]</sup> to be 11.5:1 while Rao et al,<sup>[6]</sup> in Chennai and Garg et al,<sup>[7]</sup> in Karnataka found it to be 2.3:1 which is similar to the findings of this study.

In the present study, discharge was found to be universal 100%) as also observed by Agarwal et al,<sup>[8]</sup> and Jebakumar et al.<sup>[9]</sup> Pain was seen in 67.3% while swelling was complained of in 38.2% patients. Kumar et al,<sup>[2]</sup> found that pain was present in 52% cases while Agarwal et al,<sup>[8]</sup> observed that pruritus was seen in 40% cases.

In this study, external opening was present in all the patients and was located posteriorly in 72.7% patients. Low anal fistula (78.2%) was commoner than the submucous one (10.2%). Most of the researchers have seen similar pattern. Sharma et al,<sup>[5]</sup> found that 62% of patients followed Goodsall's law and was accurate in 62% of anterior external opening and 60% of posterior external opening. Agarwal et al,<sup>[8]</sup> found that 88% of the patients had low fistula-in-ano while 12% had high fistula-in-ano. Internal opening was palpable only in 44% of the patients. Jebakumar et al,<sup>[9]</sup> found that 68% cases had the posterior, 24% cases had anterior and 7% cases had lateral external opening.

The aetiology was found to be due to non-specific inflammation in 70.9% cases and tuberculosis in one patient (1.8%). Rao et al,<sup>[6]</sup> examined the resected tissue of anal fistula and concluded that 59.6% cases showed chronic nonspecific inflammation while granuloma with caseation necrosis was present in 12.6% cases.

Fistulectomy was done in 72.7% cases while fistulotomy was performed in 27.3%. In the study done by Agarwal et al,<sup>[8]</sup> fistulectomy with primary closure was done in 36% of the patients while fistulectomy was done in 60% of the patients. Fistulectomy was needed in 68% cases in the study done by Kumar et al,<sup>[2]</sup> and Jebakumar et al.<sup>[9]</sup>

Mean healing time was  $3.7 \pm 1.1$  weeks in this study. At four weeks, wound healing was seen in 65% cases by Jebakumar et al,<sup>[9]</sup> and 46% by Kumar et al.<sup>[2]</sup> Vyas et al,<sup>[1]</sup> found mean healing time to be  $28 \pm 7$  days.

Regarding post-operative complications, 14.5% patients had wound infection, 7.3% had headache and 1.8% had retention of urine. Ramachandra et al,<sup>[4]</sup> found that post-operative fever and wound infection was seen in 15% patients each of fistulectomy and fistulotomy. Sharma et al,<sup>[5]</sup> have reported that bleeding occurred in only 14% of patients following fistulectomy.

The pattern of fistula is usually similar with male predominance. The site and type is same as seen in other studies. Post-operative complications vary from place to place and according to the type of surgery performed.

## CONCLUSION

It is concluded that fistula-in-ano has male preponderance affecting the third and fourth decade of life maximally. Fistulectomy is the usual

procedure needed. The post operative complications tend to be minimal and mild in nature.

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